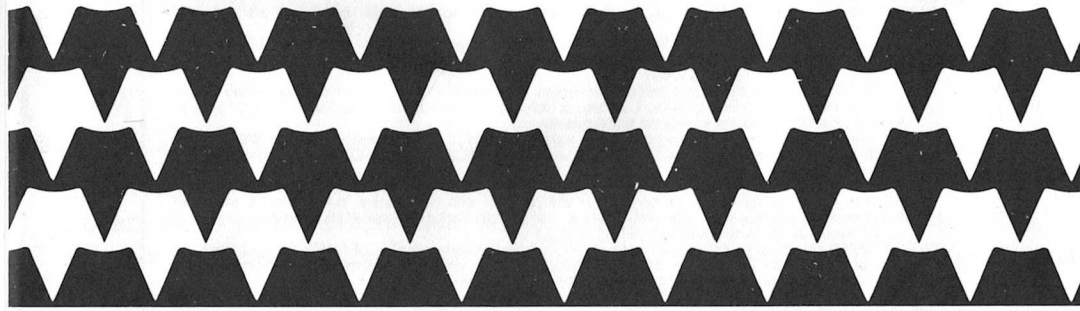
Cat. No. 26-1384

Computer Cassette Recorder CCR-83



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The FCC Wants You to Know

This equipment generates and uses radio frequency energy. If not installed and used properly, that is in strict accordance with the manufacturer's instructions, it may cause interference to radio and television reception.

It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the computer with respect to the receiver
- Move the computer away from the receiver
- Plug the computer into a different outlet so that computer and receiver are on different branch circuits.

Warning

This equipment has been certified to comply with the limits for a Class B computing device, pursuant to Subpart J of Part 15 of FCC Rules. Only peripherals (computer input/ouput devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this computer. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

Notice: You must use a shielded cable when connecting this device.

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Computer Cassette Recorder CCR-83 Operation Manual:
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10 9 8 7 6 5 4 3 2 1

WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

FEATURES

Computer Controlled — Allows the computer to start or stop the tape to load or save programs and data.

CUE and REVIEW Functions — Enable instant fast forward or rewind while in either Record or Play mode independent of the computer. Let you quickly locate desired portion of the tape.

Automatic Shut-Off Mechanism — Automatically shuts off the recorder when the end of the tape is reached while in the Play or Record mode and/or while loading or saving programs and data files. This saves wear and strain on the unit, the tape, and the batteries.

Built-in A.L.C. (Automatic Level Control) Circuit — Lets you automatically obtain a perfect recording level for both recording music and saving programs/data — no need to adjust the volume.

Tape Counter — Helps you find a specific section of the tape quickly.

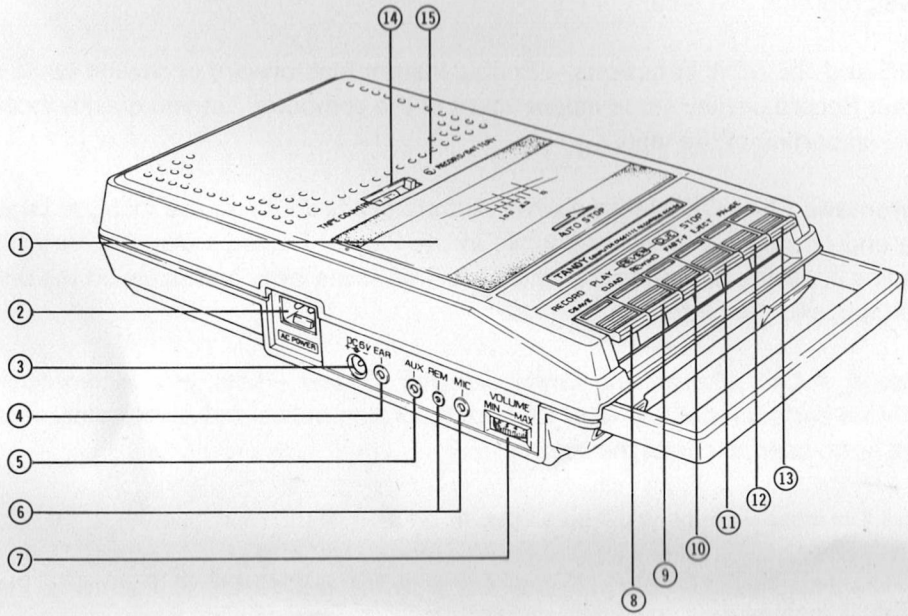
Mechanical Pause — Lets you stop the tape instantly while in Record or Play mode.

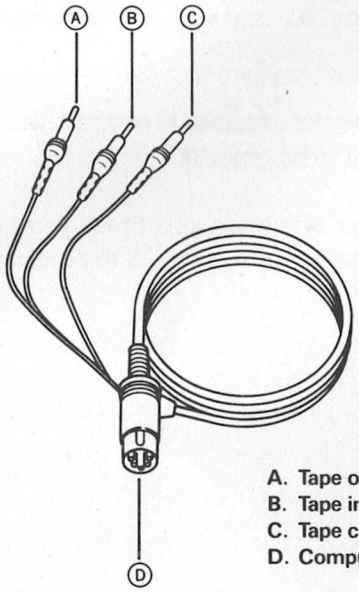
Convenient 3-Way Power — Can be used with AC, batteries, or an external source of 6 volts DC.

RECORD/BATTERY Indicator — Flickers when the recorder is at peak recording levels, and lights up when the batteries need to be replaced.

Note: The RECORD/BATTERY indicator flashes briefly as you press function buttons. This is normal and does not mean the batteries are weak. If the indicator stays on, the batteries need to be replaced.

CONTROLS AND CONNECTIONS





1. Cassette Compartment
2. AC Line Cord Receptacle
3. DC 6V Jack
4. EAR (earphone) Jack
5. AUX (auxiliary) Input Jack
6. REM/MIC (remote/microphone) Jack
7. VOLUME Control
8. RECORD/CSAVE Button
9. PLAY/CLOAD Button
10. REWIND/REVIEW Button
11. FAST-F (fast forward)/CUE Button
12. STOP/EJECT Button
13. PAUSE Button
14. Tape Counter
15. RECORD/BATTERY Indicator

A. Tape output plug (to EAR Jack)
B. Tape input plug (to AUX Input Jack)
C. Tape control plug (to REM Jack)
D. Computer cassette plug (to TAPE output on computer)

PREPARATION

CHOOSING A POWER SUPPLY

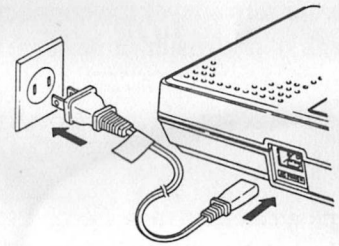
You can operate the recorder using any of these power sources:

- Household AC (with supplied AC power cord)
- Four C batteries
- 12V automotive battery (with an optional DC adapter)

Note: We recommend that you always use AC power when using the CCR-83 with a computer.

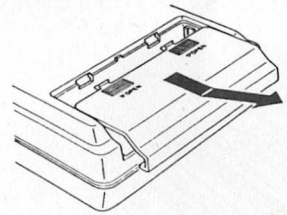
Operating on AC Power

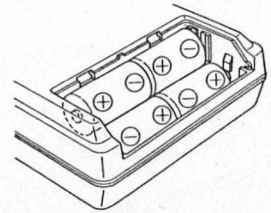
Connect one end of the AC power cord to the recorder's AC POWER jack, and plug the other end into a standard AC outlet. Connecting the cord to the unit automatically disconnects the internal battery circuit. Never leave the cord plugged into an AC outlet when it is not connected to the recorder.



Installing Batteries

Your recorder requires four Size C batteries. We recommend Radio Shack Cat. No. 23-581 or 23-551. To load the batteries, turn the recorder over and open the battery compartment cover. Insert the batteries as indicated in the compartment; then, close the cover.

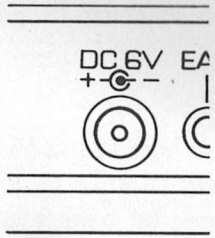




Caution: Weak batteries, even "leak-proof" types, may swell and leak. To avoid damage to the recorder, replace weak batteries. If you are going to store the recorder for a month or longer, remove the batteries.

Using an Automotive Battery

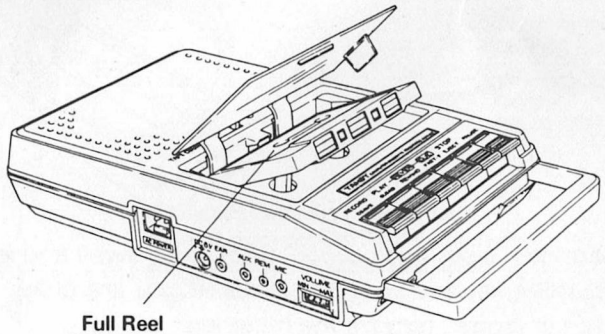
If your vehicle has a 12-volt, negative ground electrical system, you can power your recorder from your vehicle battery. Use our DC auto adapter (Cat. No. 14-844D). Set the switch on the adapter to the 6V position and connect one end to the recorder's DC 6V jack. Connect the other end of the adapter to your vehicle's lighter socket. When the adapter is connected, the internal battery circuit is automatically disconnected.



Caution: If you use another adapter, you must be sure that the voltage is correct (6V DC only) and that the center terminal of the connector is negative. Failure to observe these two vital points might result in damage to your recorder and/or adapter.

INSERTING THE TAPE

Before inserting or removing the cassette tape, be sure to press the STOP/EJECT button to cancel any functions that may have been previously selected. Open the cassette lid by pressing the STOP/EJECT button again. Hold the cassette with the open side toward you and insert it into the opening so that the full reel is on your left; then, close the lid. After you have finished recording or playing one side of the cassette, open the lid, turn the cassette over and reinsert it. You are now ready to record or play the second side.



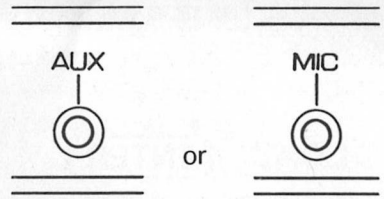
CONNECTING TO THE COMPUTER

A computer connection cable is supplied with your recorder. However, some computers require their own connection cables. Refer to your computer owner's manual.

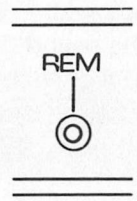
Note: Some connecting cables have plugs that are too long to fit into the jacks on the recorder. When using a connection cable other than the one supplied with your recorder, insert the plug until you feel a slight catch. Do not try to force the plug all the way in.

1. Connect the output plug (black) to the recorder's EAR jack.

2. Connect the input plug (larger gray) to the recorder's AUX or MIC. See your computer owner's manual.



3. If your computer has a remote control function, connect the control plug (smaller gray) to the recorder's REM.

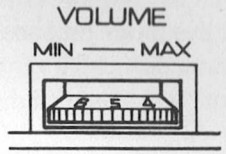


4. Connect the computer cassette plug (opposite the three plugs) to the cassette tape output on the computer.

OPERATION WITH THE COMPUTER

LOADING A PROGRAM OR DATA FILE FROM TAPE

1. Set the VOLUME control to the correct level for your computer. See the computer owner's manual for details. If you have trouble loading programs or inputting data, try adjusting the volume.



2. Be sure the tape is positioned to the point just before the beginning of recorded programs or data. Use the tape counter or CUE or REVIEW functions to locate the correct position.

3. If your computer does not have a remote control function, press PAUSE before the computer is ready to load the program or input the data. If your computer does have a remote control function, proceed to Step 4.

4. Press PLAY/CLOAD. On the computer keyboard, type CLOAD and press ENTER (or equivalent command on your computer). If you pressed PAUSE in Step 3, press it again to release it. The tape will begin moving and programs or data will be transferred to the computer.

CLOAD **ENTER**

5. If your computer has a remote control function, the tape will stop automatically when operation is complete. If your computer does not have a remote control function, listen to the sound of the data on the moving tape. (Some computers have a command that enables you to hear the data sounds through the monitor speaker. Color Computers use the AUDIO ON command.) When the sound stops, press STOP/EJECT.

Caution: Do not leave the RECORD and/or PLAY buttons engaged for a long period of time. Doing so can cause a flat spot on the drive wheel, resulting in sound distortion.

SAVING A PROGRAM OR DATA FILE ON TAPE

1. Insert a blank (new or bulk-erased) tape, and press REWIND/REVIEW to rewind the tape to the beginning. If you use a tape with a leader, be sure to press PLAY for a few seconds to advance the tape past the leader.

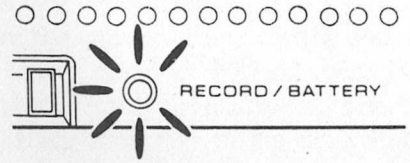
   For maximum protection of digital computer data, use cassettes that are specially certified for computer use (eg., Cat. No. 26-301, 26-302 or 26-308).

2. If your computer does not have a remote control function, press PAUSE before the computer is ready to save the program or the data.

3. Press RECORD. (When RECORD/CSAVE is pressed, the PLAY button is pressed automatically.) If you pressed PAUSE in step 2, press it again to release the pause mode. Then, type CSAVE on the computer keyboard and press ENTER (or the equivalent key on your computer). The tape will begin moving and the programs or data will be saved onto the tape.

CSAVE **ENTER**

While the recorder is receiving data, the RECORD/BATTERY indicator will flicker. There is no need to adjust the VOLUME; the recorder does that automatically during the save operation.



4. When the save operation is complete, a computer with a remote control function stops the tape automatically. If your computer does not have a remote control function, press STOP/EJECT at the end of the save operation.

Notes:

- When you are saving data on a cassette tape with a computer that does not have a remote control function, we recommend that you write a program that displays the end of data transfer on the screen. Then, you can manually stop the recorder without much loss of the tape.

- It is possible to record two or more programs or data files on one side of a tape. However, this takes a little extra care and attention on your part. First, rewind the tape and reset the tape counter. Then keep a written record of the counter reading where each program or data file starts.

- Keep the recorder as far as possible from your monitor or television. This prevents interference that could cause I/O errors.

- When you are ready to load in a particular program or date file, rewind the tape, reset the counter, and then fast-forward or rewind to position the tape just ahead of the desired tape section. Remember, you can fast-forward or rewind manually without disconnecting the remote jack.

OTHER USES FOR THE RECORDER

PLAYING PRERECORDED TAPES

1. Insert the prerecorded cassette tape.

2. Rewind the tape by pressing REWIND/REVIEW.

3. Press STOP/EJECT when you reach the section of the tape you wish to play.

4. Press PLAY/CLOAD. Adjust the VOLUME control to a comfortable setting.

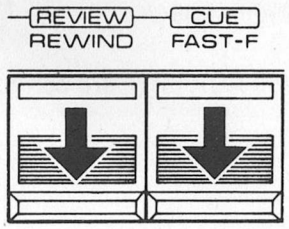
5. To stop playback, press STOP/EJECT. When the tape reaches the end, the unit automatically shuts off.

6. When you want to listen privately, plug an earphone into the EAR jack. Or, for greater fidelity, you can use an external speaker which has an impedance of 8-16 ohms. Connect the speaker via a patch cord plugged into the EAR jack. (Visit your local Radio Shack store for all accessories.)

To advance the tape rapidly, press FAST-F/CUE. When you reach the approximate point you want, press STOP/EJECT and then press PLAY/CLOAD.

To rewind the tape rapidly, press REWIND/REVIEW. When you reach the approximate point you want, press STOP/EJECT and then press PLAY.

In each case, always press STOP/EJECT before pressing PLAY/CLOAD. Abrupt change in tape speed or direction can damage the tape. When you press and hold FAST-F/CUE or REWIND/REVIEW while the PLAY button is engaged, either in the Play or Record mode, the tape will move rapidly and, at the same time, you can hear the recorded sound in a high-pitched tone. (The RECORD/CSAVE button is released if the unit is in the Record mode.) This helps you to locate the end or beginning of a particular section of the tape. Release FAST-F/CUE or REWIND/REVIEW, and normal playback is resumed.



PAUSE provides a convenient method of starting and stopping the recorder whenever it is playing or recording. It does not function in Fast-forward or Rewind mode. To stop tape movement, press PAUSE; press PAUSE once more to restart tape motion.

RECORDING WITH AN EXTERNAL MICROPHONE

Connect an optional external microphone to the MIC jack. To begin recording, press RECORD/CSAVE. To stop recording, press STOP/EJECT. If the microphone you are using has an ON/OFF switch for remote control, connect its smaller remote operation plug to the REM jack. Then, you can turn the recorder on and off electrically with the switch on your mic. However, when the recording session is finished, be sure to press STOP/EJECT to disengage the mechanism.

RECORDING FROM A RADIO OR PHONOGRAPH

1. Connect the external sound source to the recorder's AUX jack using a suitable patch cord with the proper plug.

2. Set the sound source's volume control to a normal listening level. The recorder sets its recording level automatically. The recorder's VOLUME control will have no effect on the sound.

3. Press RECORD/CSAVE.

4. To stop recording, press STOP/EJECT.

Note: When both the MIC and AUX jacks are connected, only MIC is functional.

TAPE TIPS

ERASING TAPES

Each time you make a recording, any previous recording on the tape is automatically erased; thus, the tape may be used for new recordings as many times as you wish. For best results, we recommend that computer tapes be bulk erased before reusing them. Use our Magnetic Bulk Tape Eraser (Cat. No. 44-232). This will assure that all traces of previously recorded data are removed and will not interfere with the new data.

Caution: The bulk tape eraser erases both sides of a cassette. If you want to erase only one side, disconnect the plugs from the MIC and/or AUX jacks and press RECORD.

ACCIDENTAL ERASURE PREVENTION

Cassettes have small plastic tabs on one edge. To prevent erasure of a previous recording, break off the plastic tab with a screwdriver. There is a tab for each side; be sure you break off the correct tab. (See Figure A.)
If you decide you want to record on the cassette after you have broken off the tabs, put a piece of tape over the hole where you broke off each tab, as shown in Figure B.

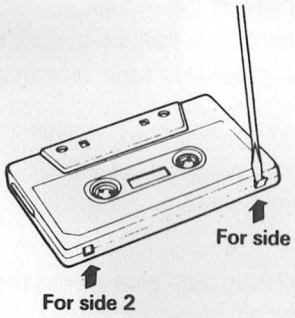


Figure A

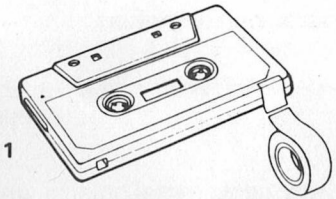
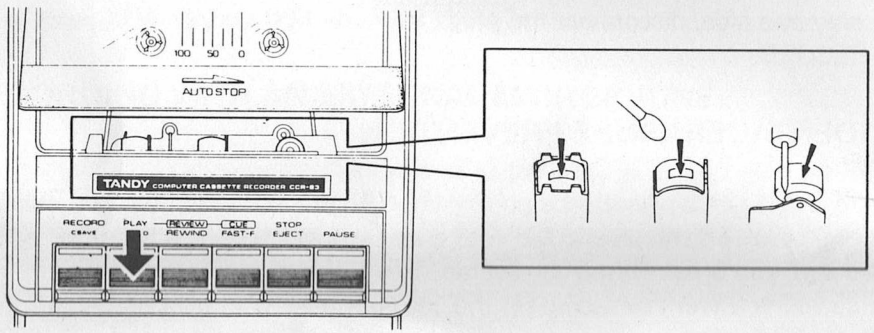


Figure B

Caution: If you have a cassette without tabs, do not try to force the RECORD button down. Doing so can damage part of the mechanism.

CARE AND MAINTENANCE

Open the cassette lid, press the PLAY/CLOAD button, exposing the erase and record heads and the rubber drive wheel. Clean these points, using a cotton swab moistened with denatured alcohol (not rubbing alcohol) or with a special head cleaning fluid. (Your local Radio Shack store has these items.) To insure good recording and playback results, clean after the first 6 hours of operation (and every 6-8 hours of operation after that). After cleaning, be sure to press the STOP/EJECT button, so that these parts may return to their normal operating position. For easy cleaning, we recommend our cassette Head Cleaner Tape (Cat. No. 44-1160).

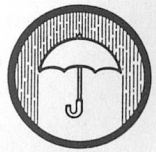


It is a good idea to periodically demagnetize the tape heads, too. Use one of our tape head demagnetizers. If you use the longer, thinner tapes (C-90 or C-120), it is absolutely vital that you keep your recorder clean. Failure to do so can result in poor tape handling, malfunction auto-stop or serious tape wrap-ups. Clean the tape handling parts well and often.

Use the tape recorder and cassettes in normal temperature and humidity environments.

Keep screwdrivers, other metal objects, and magnets away from the tape heads.

Your CCR-83 is an example of superior design and craftsmanship. The following suggestions will help you care for your new cassette recorder so that you can enjoy it for years.



Keep the cassette recorder dry. If it does get wet, wipe it dry immediately. Liquids might contain minerals that can corrode the electronic circuits.

Use and store the cassette recorder only in normal temperature environments. High temperatures can shorten the life of electronic devices, damage batteries, and distort or melt plastic parts.

Handle the cassette recorder gently and carefully. Dropping it can damage circuit boards and cases and can cause the cassette recorder to work improperly.

Keep the cassette recorder away from dust and dirt which can cause premature wear of parts.

Wipe the cassette recorder with a dampened cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the unit.

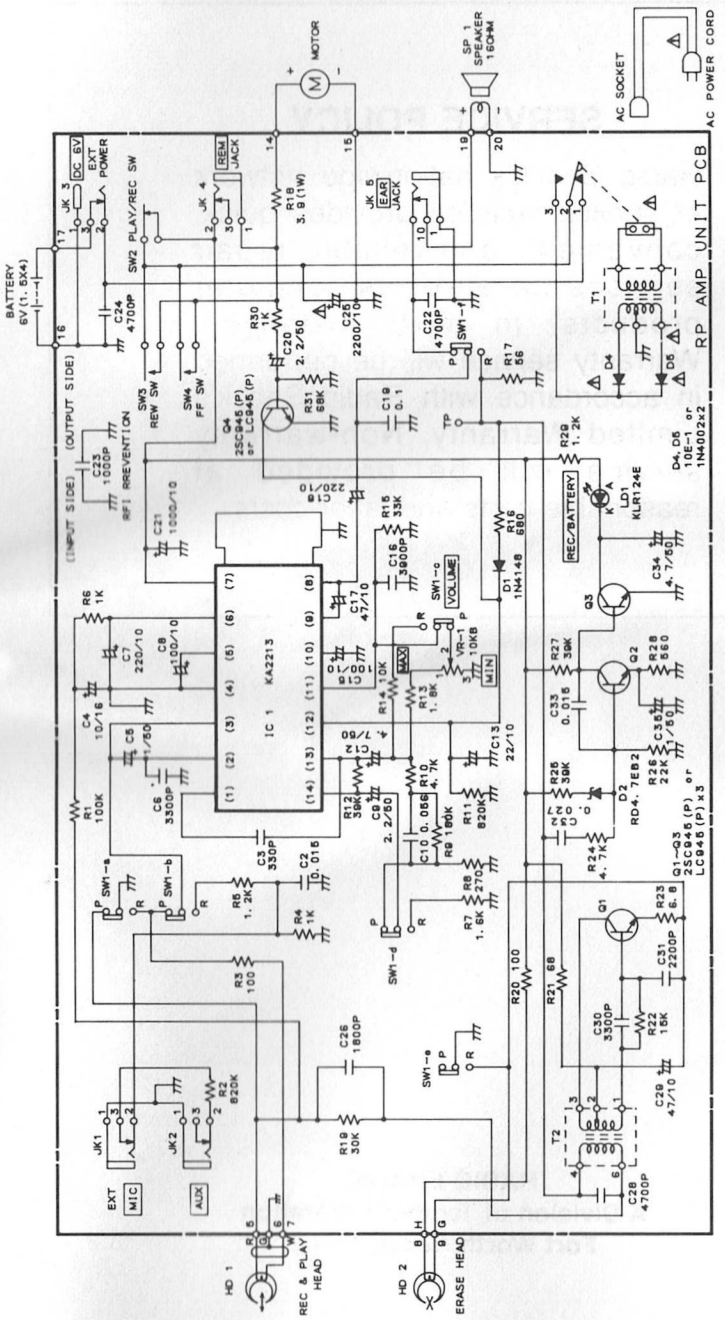
Use only fresh batteries of the recommended size and type. Always remove old or weak batteries. They can leak chemicals that destroy electronic circuits.

Modifying or tampering with the cassette recorder's internal components can cause a malfunction and might invalidate the product's warranty. If your cassette recorder is not performing as it should, take it to your local Radio Shack store. Our personnel can assist you and arrange for service if needed.

SPECIFICATIONS

Tape System:	2-track monaural
Tape Speed:	1 $\frac{7}{8}$ inch/sec. (4.75 cm/sec.)
Wow and Flutter (WRMS):	0.2 %
Signal-to-Noise Ratio:	45dB (DC)/40 dB (AC)
Erase System:	DC bias Erasing
Recording System:	AC bias
ALC delay time at Recording:	0.1 sec.
Turn on time at Play:	0.1 sec.
Power Requirement:	AC 120V 60 Hz, DC 6V (four 1.5V "C" batteries or via optional DC adapter)
Dimensions (H x W x D):	9 $\frac{27}{32}$ x 5 $\frac{3}{4}$ x 1 $\frac{59}{64}$ inch (250 x 146 x 49 mm)
Weight:	2.6 lbs. (1.2 kg)
Accessories:	AC power cord, computer cable

SCHEMATIC DIAGRAM


RP AMP UNIT PCB
USA-AC120V 60Hz
CANADA-AC120V 60Hz
UK/AUSTRALIA-AC240V 60Hz
EG-AC220V 50Hz
NOTES: (1) ALL RESISTANCE VALUES ARE INDICATED IN "OHM" (K=10³ OHM).
(2) ALL CAPACITANCE VALUES ARE INDICATED IN "μF" (P=10⁻⁶μF).
(3) R/P SW (SW1-a~SW1-f) IS SET IN "PLAY" POSITION.
(4) SW2 IS SET IN "ON" POSITION. SW3 AND SW4 ARE SET IN "OFF" POSITION.
CAUTION: SINCE THE COMPONENTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY. USE THOSE DESCRIBED ON PARTS LIST ONLY.

SERVICE POLICY

Radio Shack's nationwide network of service facilities provides quick, convenient, and reliable repair services for all of its computer products, in most instances. Warranty service will be performed in accordance with Radio Shack's Limited Warranty. Non-warranty service will be provided at reasonable parts and labor costs.

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